CLAIMS

I/We claim:

1. A feed composition comprising soy meal, wherein the soy meal is no more than about 20 weight percent (wt.%) of the feed composition and has a soy isoflavone content that provides the feed composition with a soy isoflavone concentration, normalized to aglycone content, of about 250-1400 parts per million on a weight basis (ppm).

2. The feed composition of claim 1 wherein the soy isoflavone concentration is at least about 500 ppm.

3. The feed composition of claim 1 wherein the soy isoflavone concentration is no greater than about 1200 ppm.

4. The feed composition of claim 1 wherein the soy isoflavone concentration is about 800-1200 ppm.

5. The feed composition of claim 1 wherein the soy meal comprises no more than about 10 wt.% of the feed composition.

6. The feed composition of claim 1 wherein the soy isoflavones include genistein, daidzin, and glycitein.

7. The feed composition of claim 1 wherein the soy meal includes soy germ meal and whole soybean meal.

8. The feed composition of claim 1 wherein the soy meal includes about 35-80 wt.% soy germ meal and a remaining portion of whole soybean meal.

9. The feed composition of claim 1 wherein the soy meal includes about 40-60 wt.% soy germ meal and a remaining portion of whole soybean meal.

10. The feed composition of claim 1 wherein the soy isoflavone concentration is about 800-1200 ppm and the soy meal includes about 35-80 wt.% soy germ meal and a remaining portion of whole soybean meal.

11. The feed composition of claim 1 wherein the soy isoflavones are a natural component of the soy meal.

12. The feed composition of claim 1 wherein the feed composition is substantially free from soy isoflavone extract.

13. A feed composition for domestic mammals comprising soy meal and a non-soy fraction, wherein

the soy meal is no more than about 20 weight percent (wt.%) of the feed composition and has a soy isoflavone content that provides the feed composition with a soy isoflavone concentration, normalized to aglycone content, of about 500-1400 parts per million on a weight basis (ppm); and

the non-soy fraction comprises at least one component selected from a group consisting of meat and bone meal, blood meal, poultry byproduct meal, tallow, wheat middlings, roughage products, oat groats, alfalfa meal, bakery by-products, brewers dried grains, distillers dried grains and solubles, citrus pulp, beet pulp, corn gluten feed, corn gluten meal, cottonseed meal, fish meal, hominy feed, kelp meal, linseed meal, sunflower meal, canola and rapeseed meal, and rice bran.

14. The feed composition of claim 13 wherein the soy isoflavone concentration is at least about 800 ppm.

15. The feed composition of claim 13 wherein the soy isoflavone concentration is no greater than about 1200 ppm.

16. The feed composition of claim 13 wherein the soy isoflavone concentration is about 800-1200 ppm.

17. The feed composition of claim 13 wherein the soy meal comprises no more than about 10 wt.% of the feed composition.

18. The feed composition of claim 13 wherein the soy isoflavones include genistein, diadzein, and glycitein.

19. The feed composition of claim 13 wherein the soy meal includes soy germ meal and whole soybean meal.

20. The feed composition of claim 13 wherein the soy meal includes about 35-80 wt.% soy germ meal and a remaining portion of whole soybean meal.

21. The feed composition of claim 13 wherein the soy meal includes about 40-60 wt.% soy germ meal and a remaining portion of whole soybean meal.

22. The feed composition of claim 13 wherein the soy isoflavone concentration is about 800-1200 ppm and the soy meal includes about 35-80 wt.% soy germ meal and a remaining portion of whole soybean meal.

23. The feed composition of claim 13 wherein the soy isoflavones are a natural component of the soy meal.

24. The feed composition of claim 13 wherein the feed composition is substantially free from soy isoflavone extract.

25. A method of producing a domestic animal feed composition having a target range of soy isoflavone concentration, comprising:

comparing an isoflavone content of a soybean meal fraction and an isoflavone content of a soy germ meal fraction to the target range, the soy germ meal fraction having a higher isoflavone content than the soybean meal fraction;

determining a proportion of the soybean meal fraction and of the soy germ meal fraction that will yield an animal feed having a total soy isoflavone content in the target range;

blending the determined proportion of the soybean meal fraction, the determined proportion of the soy germ meal fraction, and a non-soy fraction, the non-soy fraction comprising at least one component selected from a group consisting of meat and bone meal, blood meal, poultry byproduct meal, tallow, wheat middlings, roughage products, and oat groats, alfalfa meal, bakery by-products, brewers dried grains, distillers dried grains and solubles, citrus pulp, beet pulp, corn gluten feed, corn gluten meal, cottonseed meal, fish meal, hominy feed, kelp meal, linseed meal, sunflower meal, canola and rapeseed meal, and rice bran.

26. The method of claim 25 wherein the isoflavone content of the soybean meal fraction is greater than zero.

27. The method of claim 25 wherein the target range has a minimum soy isoflavone concentration of at least about 500 parts per million of the feed composition on a weight basis.

28. The method of claim 25 wherein the target range is encompassed by a range of about 500 parts per million of the feed composition on a weight basis (ppm) to about 1400 ppm.

29. The method of claim 25 wherein the target range is encompassed by a range of about 800 parts per million of the feed composition on a weight basis (ppm) to about 1200 ppm.

30. The method of claim 25 wherein the soybean meal fraction and the soy germ meal fraction together comprise no more than about 20 weight percent of the feed composition.

31. The method of claim 25 wherein the soybean meal fraction and the soy germ meal fraction together comprise no more than about 10 weight percent of the feed composition.

32. The method of claim 25 further comprising, prior to comparing the isoflavone contents, producing the soy germ meal by extracting a soy germ oil from a soy product including soybean meats, hulls, and germs, with the germs comprising at least about 30 weight percent of the soy product.